

### ABSTRACT OF THE DISCLOSURE

A method for I/Q imbalance calibration of an OFDM system comprising the steps of initializing parameters  $A_p$ ,  $B_p$  and  $\gamma_p$ , estimating a loop delay factor  $L$ , generating a discrete-time test signal  $x[n]$ , deriving a signal  $x_{com}[n]$  by compensating the test signal  $x[n]$  according to a function with parameters  $A_p$ ,  $B_p$  and  $\gamma_p$ , converting the signal  $x_{com}[n]$  to an analog signal  $x(t)$ , applying I/Q modulation to the signal  $x(t)$  and outputting a modulated signal  $x_{mod}(t)$ , obtaining a characteristic signal  $x_c(t)$  of the modulated signal, obtaining a signal  $x_s[n]$  by sampling the characteristic signal  $x_c(t)$  and obtaining statistics  $U_1$  and  $U_2$  of the signal  $x_s[n]$ , and updating the parameters  $A_p$ ,  $B_p$  and  $\gamma_p$  respectively by functions of  $L$ ,  $U_1$ ,  $U_2$ , and the current values of  $A_p$ ,  $B_p$  and  $\gamma_p$ .